EXFOR News

(N. Otsuka, 2011-05-20)

Usually nuclear reaction data evaluators are working for evaluation of reactions with specific target isotopes, and they are looking for newly available experimental data relevant to their evaluation. However, it is not easy for them to know what have been recently added into the EXFOR library.

Under this circumstance, a list of newly compiled EXFOR entries sorted by target isotopes/reactions would be useful to inform new data sets useful for them, and I made an attempt to extract the list from the TRANS tapes. An example is given in the next page.

The format adopted by CINDA Book seems to be useful for the purpose. However, we cannot show reaction products (=residual nuclide) explicitly by the CINDA Book format. Therefore I added one new column “Product” to show both outgoing particles and reaction products. Another new column is introduced for the EXFOR entry number.

Hyperlinks to the abstracts of the original articles are provided when available. Also the X4+ output generated in the NDS EXFOR System is accessible from the last column of the list.

I plan to create this list when the EXFOR Master File is updated.

20 Calcium 41

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,el	^{41}Ca	DA	2GERBOC	5.6+06	7.1+06	Jour	NP/A,394,189	83	D.Frekers+	F1042

20 Calcium 48

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
α,el	^{48}Ca	DA	2GERBOC	5.5+06	8.4+06	Jour	NP/A,394,189	83	D.Frekers+	F1042

26 Iron 56

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
γ,p	^{55}Mn	DAP	2JPNTOH		2.4+07	Jour	JPJ,25,(3),664	Sep 68	K.Shoda+	K2196

28 Nickel

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,x+α	inclusive	DA	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824
p,x+α	inclusive	DAE	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824
p,x+d	inclusive	DA	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824
p,x+d	inclusive	DAE	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824
p,x+^{3}He	inclusive	DA	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824
p,x+^{3}He	inclusive	DAE	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824
p,x+p	inclusive	DA	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824
p,x+p	inclusive	DAE	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824
p,x+t	inclusive	DA	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824
p,x+t	inclusive	DAE	1USABRK	1.9+08	1.9+08	Rept	UCRL-3334	56	L.E.Bailey	C1824

29 Copper

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
γ,x	^{62}Cu	CS	2JPNTOK		6.2+08	Jour	JPJ,19,(4),427	Apr 64	A.Masaike	K2191

34 Selenium 77

Reaction	Product	Quant.	Lab.	Energy (eV) Min	Energy (eV) Max	Type	Documentation Ref Vol Page	Date	Author	Data #
p,n	^{77}Br	CS	2GERJUL	2.1+07	5.7+07	Jour	RCA,98,749	10	I.Spahn+	D4239